

Vol. 7

No. 11

# BULLETIN

OF THE

## CHICAGO ACADEMY OF SCIENCES

### THE PSEUDOSCORPION TRIBE CHELIFERINI

BY

C. CLAYTON HOFF

*Colorado Agricultural and Mechanical College  
Fort Collins, Colorado*



CHICAGO

*Published by the Academy*

1946

*The Bulletin of the Chicago Academy of Sciences* was initiated in 1883 and volumes 1 to 4 were published prior to June, 1913. During the following twenty-year period it was not issued. Volumes 1, 2, and 4 contain technical or semi-technical papers on various subjects in the natural sciences. Volume 3 contains museum reports, descriptions of museum exhibits, and announcements.

Publication of the *Bulletin* was resumed in 1934 with volume 5 in the present format. It is now regarded as an outlet for short to moderate-sized original papers on natural history, in its broad sense, by members of the museum staff, members of the Academy, and for papers by other authors which are based in considerable part upon the collections of the Academy. It is edited by the Director of the Museum with the assistance of a committee from the Board of Scientific Governors. The separate numbers are issued at irregular intervals and distributed to libraries and scientific organizations, and to specialists with whom the Academy maintains exchanges. A reserve is set aside for future need as exchanges and the remainder of the edition offered for sale at a nominal price. When a sufficient number of pages have been printed to form a volume of convenient size, a title page, table of contents, and index are supplied to libraries and institutions which receive the entire series.

**Howard K. Gloyd, Director of the Museum**

***Committee on Publications:***

Alfred Emerson, Professor of Zoology, University of Chicago.  
John Rice Ball, Professor of Geology, Northwestern University.  
Hanford Tiffany, Professor of Botany, Northwestern University.

**BULLETIN**  
  
**OF THE**  
  
**CHICAGO ACADEMY OF SCIENCES**

---

**THE PSEUDOSCORPION TRIBE CHELIFERINI**

**C. CLAYTON HOFF\***

In 1931 and 1932, J. C. Chamberlin published a revision of the pseudoscorpion family Cheliferidae Hagen, in which he divided the group into two subfamilies, Withiinae Chamberlin and Cheliferinae Simon. He subdivided the Cheliferinae into two tribes of which one, the Cheliferini, is the subject of the present paper.

When first established, the tribe Cheliferini included six genera. One of these, *Beierius* J. C. Chamberlin, recently has been found by Vachon (1941) to belong to the tribe Dactylocheliferini Beier (of which *Lissocheliferini* J. C. Chamberlin is a synonym) . Since the original description of the tribe Cheliferini, five new genera have been described. The present paper serves to review the genera of the tribe, to emend the genus *Idiochelifer* Chamberlin, and to describe two new genera. A key is given for separation of the genera. In the present paper, no effort has been made to give complete diagnoses of all the genera of Cheliferini, since many of the generic characters may be determined from the key. The systematic position and diagnosis of the tribe Cheliferini may be found by consulting Chamberlin (1931, 1932) and Beier (1932) .

\*The Colorado Agricultural and Mechanical College, Fort Collins, Colorado.  
Formerly Quincy College, Quincy, Illinois.

Suborder Monosphyronida J. C. Chamberlin

Family CHELIFERIDAE Hagen

Subfamily Cheliferinae Simon

Tribe Cheliferini J. C. Chamberlin

***Idiochelifer* J. C. Chamberlin, 1932, emend.**

*Idiochelifer* J. C. Chamberlin, Canad. Ent., 1932, 64:19.

*Idiochelifer* J. C. Chamberlin, Beier, Das Tierreich, 1932, 58:228-229.

*Emended diagnosis.* Cephalothorax a little longer than wide, with a few large, seta-bearing tubercles scattered among the investing granules; cephalothorax with two cross furrows; eyes present. Tergites divided, those of the male with crests or keels. Each coxa of the fourth leg of the male with a coxal sac and lateral spur; subterminal setae of the tarsus of the fourth leg *toothed, not simple*; tarsus of the first leg of the male without a terminal spine; claws of pedal tarsi simple except one claw of first leg of male with a well-developed accessory tooth which is not equally bifid; tarsus of the fourth leg with a tactile seta distal to the midpoint. Cribiform plates of the female genitalia moderately small.

*Genotype.* *Chelifer cancroides* var. *nigripalpus* Ewing, 1911.

*Remarks.* In the establishment of the present genus, J. C. Chamberlin examined type specimens deposited at Cornell University and recorded the subterminal setae of the fourth pedal tarsi as being simple. On examination of the same as well as other specimens, the present writer finds that the subterminal setae of the pedal tarsi are weakly toothed or dentate. This error in the original description probably resulted from the type specimens being so mounted that the details of the subterminal setae are seen with difficulty.

Based on the generic description previously available, the species *fulvopalpus* Hoff, 1946, was erroneously assigned to the genus *Idiochelifer*. Under the emended genus, however, it is necessary to assign *fulvopalpus* to *Levichelifer*, a new genus described below. Considering the genus *Idiochelifer* as emended here, it is clear that *Hysterochelifer longidactylus* Hoff, 1945, belongs in *Idiochelifer* and that it is a synonym of *nigripalpus*. At the time *longidactylus* was described, there was in the literature no adequate description of *nigripalpus*.

***Levichelifer*, new genus**

*Diagnosis.*—Cephalothorax about as long as wide; surface granular, with numerous seta-bearing tubercles; two cross furrows present; eyes present; tergites divided, distinct tergal crests or keels present in the male.

Coxa of the fourth leg of the male with a coxal sac and lateral spur; subterminal seta of the tarsus of the fourth leg simple; tarsus of the first leg of the male with a poorly developed terminal spine, in some specimens the spine is virtually wanting; terminal claws of the legs, except the first leg of the male, simple and entire.

*Genotype.* *Idiochelifer fulvopalpus* Hoff, 1946.

*Remarks.* The present genus appears closely related to the Indo-Chinese genus *Metachelifer* Redikortzev, 1938, from which it may be separated by the presence of a weakly developed terminal spine on the first pedal tarsus of the male. Morphological relationship is also indicated with the genus *Cubachelifer* Hoff, 1946, but the latter has a well developed tarsal spine on the first leg of the male and both claws of the second pedal tarsi of the male are bifid. The general affinities of the various genera of Cheliferini will probably become more clear and certain as additional species are discovered and the generic diagnoses become more complete: At present, the genotype is the only species known in the genus.

### ***Paisochelifer*, new genus**

*Diagnosis.* Carapace wider than long, uniformly granular; transverse furrows deeply impressed, the posterior furrow about one-half as far from the posterior carapacial margin as from the median furrow; one pair of eyes. Tergites, including the eleventh, divided; lateral keels of the male wanting or very weakly developed. Flagellar setae of chelicera smooth, not serrate. Movable chelal finger with *st* nearer to *sb* than to *t*; fixed finger with *est* and *ist* on nearly the same level and considerably proximal to the midpoint of the finger. Coxa of the fourth leg of the male with coxal sac; spur of coxa IV of the male lacking; subterminal setae of the fourth tarsus weakly toothed; tarsus of the first leg of the male without a terminal spine; claws of pedal tarsi, except in the first leg of the male, simple; a tactile seta located distal to the midpoint of the fourth pedal tarsus.

*Genotype.* *Hysterochelifer callus* Hoff, 1945.

*Remarks.* An examination of additional specimens of *callus* shows that the species does not belong in the genus *Hysterochelifer* and indicates the necessity of erecting the new genus *Paisochelifer*. This genus has considerable relationship with *Idiochelifer* as emendated here. The two genera can be separated by the absence of well-developed tergal keels in the male and the uniformly granular nature of the carapace of *Paisochelifer*. The genotype is the only species known.

## KEY TO THE GENERA OF THE TRIBE CHELIFERINI

The present key includes only the males, since an incomplete knowledge of the female structures, especially of the genitalia, makes virtually impossible the formulation of a satisfactory and useful key to the females. The fossil genus *Oligochelifer* Beier is not included. The key makes use of couplets and schemes taken from the keys of previous workers (Chamberlin, 1932; Beier, 1932; Roewer, 1937; and Vachon, 1940). For the convenience of those who may use the key, an indication of the relative number of included species and a statement of the known geographical range have been given for each genus.

- 1 a. Coxal sac absent from the fourth coxa; one species, western United States *Haplochelifer* J. C. Chamberlin, 1932.
- b. Coxal sac present in each fourth coxa 2
- 2 a. Subterminal setae of fourth pedal tarsus entire 3
- b. Subterminal setae of fourth pedal tarsus toothed 5
- 3 a. Well-developed terminal spine on the first pedal tarsus; each tarsal claw of the second leg with a strongly developed accessory denticle; one species, Cuba *Cubachelifer*
- b. Terminal spine of first pedal tarsus wanting or poorly developed; claws of second pedal tarsi simple 4
- 4 a. No terminal spine on first pedal tarsus; tarsus of first leg deepest in the proximal part, becoming much less deep towards the distal end; one species, Indo-China *Metachelifer*
- b. Terminal spine of first leg poorly developed, vestigial, in some males virtually wanting; tarsus of the first leg subcylindrical, of nearly uniform depth throughout; one species, southern United States and northern Mexico *Levichelifer*, new genus.
- 5 a. Tarsal claws of the fourth leg divided or with an accessory tooth 6
- b. Tarsal claws of the fourth leg simple 8
- 6 a. Terminal spine on tarsus of first leg; several species, United States and Mexico *Parachelifer* J. C. Chamberlin, 1932.
- b. Terminal spine absent from tarsus of first leg 7
- 7 a. Subbasal seta absent from base of chelicera; one species, almost cosmopolitan *Chelifer* Geoffroy, 1762.
- b. Subbasal seta present on base of chelicera; one species, Portugal *Mesochelifer* Vachon, 1940.

- 8 a. Inner surface of palpal femur and tibia ornamented by long finger-like processes placed perpendicular to the inner surface of the podomeres; one species, central Asia *Strobilochelifer* Beier, 1932.
- b. Palpal femur and tibia not ornamented by fingerlike processes, but, at the most, marked on the inner surface by large papillose or conical granules interspersed among the investing granules 9
- 9 a. One of the tarsal claws of each first leg bifid; one species, Serbia *Karachelifer* Hadzi, 1938.
- b. One of the tarsal claws of the first leg bears an accessory tooth but is not strictly bifid 10
- 10 a. Tergal keels virtually absent; spurs on coxae IV absent; one species, central United States *Paisochelifer*; new genus.
- b. Tergal keels present; spurs on coxae IV 11
- 11 a. Terminal spine on tarsus of first leg; several species, Holarctic *Hysterochelifer* J. C. Chamberlin, 1932.
- b. Terminal spine absent from the tarsus of first leg; one species, central United States\*
- Idiochelifer* J. C. Chamberlin, 1932, emend.

Beier, Max

Chamberlin, J. C.

1932 A synoptic revision of the generic classification of the Chelonethid family Cheliferidae Simon. *Ibid.*, vol. 64, p. 17-21, 35-39.

Ewing, H. E.

\*Two Australian species reported by Tubb (Proc. Roy. Soc. Victoria, N. S. 1937, vol. xlix, part II, p. 414-415) as belonging to the genus *Ideochelifer* [sic] do not belong here. It is possible that they belong in the genus *Metachelifer*, but the inadequate descriptions given by Tubb preclude certain generic assignment at this time.

Hadzi, J.

- 1938 Pseudoskorpioniden aus Südserbien . Bull. Soc. Sci. Skoplje, vol. 18, p. 13-38. [Not available to the present writer.

Hoff, C. Clayton

- 1945 New species and records of cheliferid pseudoscorpions. Amer. Midl. Nat., vol. 34, p. 511-522.
- 1946 New pseudoscorpions, chiefly neotropical, of the suborder Monosphyronida. Amer. Mus. Novitates, no. 1318, p. 1-32.

Redikortzev, V.

- 1938 Les pseudoscorpions de l'Indochine française recueillis par M. C. Dawy-doff. Mém. Mus. Natl. Hist. Nat. Paris, new ser., vol. 10, p. 69-116.

Roewer, C. Fr.

- 1937 Chelonethi oder Pseudoskorpione. In Bronn, H. G., Die Klassen und Ordnungen des Tierreichs. Leipzig, vol. 5 (div. 4, book 6, no. 2), p. 161-320.

Vachon, Max

- 1940 Elements de la Faune Portugaise des pseudoscorpions (Arachnides) avec description de quatre espèces nouvelles. Publ. Inst. Zool. "Augusto Nobre," Faculdade de Ciências do Porto, vol. 2, p. 1-30. (Reprinted from: Anais da Faculdade de Ciências do Porto, vol. 25, no. 3.)
- 1941 Remarques sur le genre Sud-Africain *Beierus* [sic] Chamberlin (Pseudoscorpions) . Bull. Mus. Natl. Hist. Nat. Paris, ser. 2, vol. 13, p. 80-81.